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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/548,319	09/07/2005	Hans-Joachim Limburg	LIMB3003/JEK	6125
23364 7590 02/12/2008 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314				
EXAMINER				
GALL, LLOYD A				
ART UNIT		PAPER NUMBER		
3673				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/548,319

## Applicant(s)

LIMBURG, HANS-JOACHIM

## Examiner

Lloyd A. Gall

## Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Applicant should note that the terminal disclaimer filed on November 30, 2007 has been approved and recorded. The previous double patenting rejections are withdrawn.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Zillman (058).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

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the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Zillman teaches a device for locking recesses 12 of a steering shaft, including a locking bolt 4, an electric motor 34, a control disk 35 rotated back and forth by the motor, wherein the disk 35 cooperates with the locking bolt 4 on its first (underlying as seen in fig. 2) side and with a rotary position detector 59 on the second upper side of the disk as seen in fig. 2. The disk 35 has teeth 38 as seen in fig. 4 to cooperate with a worm 40. The second upper side of the disk 35 has a spiral groove 43, 44, 47 which also cooperates with the detector 59.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (009) in view of Haldric et al (145).

Sato teaches a steering shaft 10 locked by a locking bolt 18, including a motor 22 actuated circular control disk 21 cooperating on its first side 29, 31, 32 with the locking bolt and on its second side at 34, 35, 36 with a rotary position detector 34, 35. The locking bolt is displaceable radially with respect to the axis of rotation of the disk 21. Haldric teaches a shaft having plural recesses 212 in fig. 3C to receive a locking bolt 12. It would have been obvious to modify the steering shaft of Sato to include plural

recesses, in view of the teaching of Haldric et al, the motivation being to allow the steering wheel to be locked at plural rotational positions, as is well known.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimig et al (587) in view of Haldric et al and Sato.

Dimig teaches a steering shaft locked by a locking bolt 14, an electric motor 18, worm 34 and circular control disk with teeth 30, the disk cooperating with the locking bolt on the first side of the disk with its cam portion 32. The bolt 14 also sides radially relative to the axis of rotation of the disk. Haldric teaches plural steering shaft recesses 212, as set forth above. Sato teaches a circular disk 21 cooperating with the locking bolt on its first side 29, 31, 32 and cooperating with a position detector at 34, 35, 36 on the second side of the disk 21. It would have been obvious to modify the steering shaft of Dimig to include plural recesses, in view of the teaching of Haldric et al, the motivation being to allow the steering wheel to be locked in plural rotational positions, as is well known. It would have been obvious to use the second side of the disk of Dimig to cooperate with a rotational position detector, in view of the teaching of Sato, the motivation being to ensure that the disk is motor actuated only through its desired positions of rotation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimig et al in view of Haldric et al and Sato as applied to claim 2 above, and further in view of Suzuki (848).

Suzuki teaches in fig. 10, a worm 39 shaft 38a being parallel to the lock bolt 32. It would have been obvious to modify the device of Dimig et al such that the worm shaft

is parallel to the locking bolt, in view of the teaching of Suzuki, the motivation being to provide a compact assembly.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimig et al in view of Haldric et al and Sato as applied to claim 3 above, and further in view of Kueng or Bauermeister.

Kueng, in fig. 11, teaches a spiral groove/rib 55 to control movement of the locking bolt 2. Bauermeister teaches a spiral groove 16a in fig. 3 to control movement of the locking bolt 14. It would have been obvious to modify the control disk of Dimig et al to include a spiral groove/rib to move the locking bolt, in view of the teaching of Kueng or Bauermeister, the motivation being to prevent unwanted free play movement of the locking bolt.

Applicant's arguments filed November 30, 2007 have been fully considered but they are not persuasive. In response to applicant's remarks on page 4, the second and third paragraphs, it is resubmitted that the Zillman reference is properly relied upon in rejecting claims 1, 2 and 6. It is first noted that the limitation "arranged to cooperate" as set forth in claim 1 is a broad limitation. It is submitted that both sides of the control member 35 of Zillman "cooperate with" a detector switch 59, and a locking bolt 4. It is further submitted that both sides of the disk 35 of Zillman "cooperate with" all other components of its locking system, to lock its steering shaft. The switch 59 of Zillman also detects that the rotary position of the disk 35 has changed when moved between its Fig. 5 position and its Fig. 2 position. Accordingly, the switch 59 detects a rotary position. The remarks in the last two paragraphs of page 4 are not clear as to why the

control member 35 of Zillman may not be regarded as a control disk. With respect to the first sentence of the last paragraph of page 4, it is submitted that the groove 24 and rib 29 of applicant as seen in fig. 1 also require a corresponding height or thickness in the direction of its axis. It is submitted that the disk of applicant includes a central hole 22, a groove 24 on one of its faces, and a projecting rib 29 on its second face. In response to the last line of page 4, it is not clear in what sense the disk of applicant meets the disk shape required by claim 1, but the control member 35 of Zillman may not be regarded as a disk. In response to the remarks on page 5, lines 2-6, it is submitted that the disk of applicant also requires a certain thickness about the borehole 22 to accommodate the inner groove 24 as well as the projecting rib 29. In response to the remark on page 5, line 11, it is resubmitted that the switch 59 of Zillman detects the final rotary position as seen in Fig. 2, as well as providing a detection that the rotary position of the control disk 35 has changed, when moving from its Fig. 5 position to its Fig. 2 position. In response to the remarks on page 5, the fourth full paragraph, faces 47, 48 are an end part of spiral grooves 43, 44.

In response to the remarks on page 6, it is resubmitted that the cam 21 of Sato may be regarded as a control disk. As seen in fig. 1, the middle vertical portion of the cam defines a circular outer shape, as seen in fig. 5. A rib 29 extends outwardly from one of its sides, just as the disk of applicant includes a rib 29 which projects outwardly from one of its sides. With respect to page 6, line 13, whether the wheel 36 or the disk 21 of Sato includes the magnet, the leftmost side of the disk 21 as seen in fig. 1 still "cooperates with" the switches 34, 35, as does the right side of the disk 21 including the

projection 21 "cooperate with" the switches 34, 35. The Haldric reference was relied upon in the rejection only for plural recesses in a steering shaft.

With respect to the remarks on page 7, the control member 30 of Dimig defines a control disk. A shaft and cam 32 project outwardly from one side of the control disk, just as the disk of applicant includes a projection 29 on a side of the disk. It is also submitted that both side faces of the control disk 30 of Dimig "cooperate with" the locking bolt, as well as the sensors 56, 58. In response to the remark on page 8, line 18, it is submitted that whether or not that the control disk 30 and cam 32 of Dimig are spaced apart, the first and second opposed side faces of the control disk 30 "cooperate with" the locking bolt, and the sensors.

In response to the remark on page 9, line 12, it is submitted that the Dimig reference was relied upon in the rejection as teaching a locking bolt displaceable radially with respect to the axis of rotation of the disk, as set forth on page 6, lines 7-8 of the last Office action. It is also submitted that the motor and locking bolt of the Dimig reference and the Suzuki reference may be regarded as being "next to" one another. The motor and locking bolt are not being claimed as contacting one another.

The remarks on pages 10 and 11 are regarded as arguing against the secondary references to Kueng and Bauermeister individually. It is submitted that the Kueng and Bauermeister references, as combined with the Dimig reference, is not being argued in the remarks.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lloyd A. Gall whose telephone number is 571-272-7056. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lloyd A. Gall/  
Primary Examiner, Art Unit 3673

/L. A. G./  
Primary Examiner, Art Unit 3673  
February 8, 2008